PATENT
A35066

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of	:	Hagen et al.
Application No.	:	06/810,002
Application Date	:	December 16, 1986
Patent No.	:	4,784,950
Issued	:	November 15, 1988
For	:	EXPRESSION OF FACTOR VII ACTIVITY IN MAMMALIAN CELLS

REVOCATION AND POWER OF ATTORNEY

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

As the assignee for the above-captioned invention, we hereby revoke all previous Powers of Attorney granted in this matter and hereby appoint Robert Neuner, Reg. No. 24,316; Richard G. Berkley, Reg. No. 25,465; Bradley B. Geist, Reg. No. 27,551; James J. Maune, Reg. No. 26,946; John D. Murnane, Reg. No. 29,836, Henry Tang, Reg. No. 29,705, Robert C. Scheinfeld, Reg. No. 31,300, John A. Fogarty, Jr., Reg. No. 22,348, Louis S. Sorell, Reg. No. 32,439, Rochelle K. Seide, Reg. No. 32,300, Gary M. Butter, Reg. No. 33,841, Lisa B. Kole, Reg. No. 35,225, Anthony Giaccio, Reg. No. 39,684, Carmella L. Stephens, Reg. No. 41,328, Alicia Russo, Reg. No. 46,192 and Kimberly J. McGraw, Reg. No. 50,994, of the firm of BAKER & BOTTS, L.L.P., 30 Rockefeller Plaza, New York, New York 10112, as attorneys to to transact all business connected with the above-identified patent.

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Please address all future correspondence to:

Lisa B. Kole
Baker & Botts, L.L.P.
30 Rockefeller Plaza
New York, New York 10112

In addition, assignee further appoints Reza Green, Reg. No. 38,475, of Novo Nordisk of North America, Inc., having an address at 405 Lexington Ave., Suite 6400, Chrysler Bldg. New York, NY 10017, as an attorney to to transact all business connected with the above-identified patent.

Dated: March 18, 2002

By: [signature]
Name: OLE F. RAMSBY
Title: MEMBER, BOARD OF DIRECTORS
NOVO NORDISK HEALTH CARE AG

Dated: 2/04/02

By: [signature]
Name: KLAUS EHRLICH
Title: PRESIDENT, BOARD OF DIRECTORS
NOVO NORDISK HEALTH CARE AG

Assignment of Patents and of June 1, 1984 Agreement Relating to Human Blood Coagulation Factors as Amended

This Assignment Agreement of September 28, 2000, (the "Agreement") governs the transfer of certain rights and obligations of ZymoGenetics, Inc., a Washington corporation having a principal place of business at 1201 Eastlake Avenue East, Seattle, Washington 98102 ("ZGI") to Novo Nordisk Health Care AG, a Swiss corporation having a principal place of business at Untere Heslibachstrasse 46, CH-8700 Küsnacht, Zurich, Switzerland("NN").

WHEREAS, ZGI is engaged generally in the research and development of biopharmaceutical products;

WHEREAS, ZGI and Novo Industri A/S entered into an agreement dated June 1, 1984 relating to human blood coagulation factors, and amended the same on November 7, 1984 (hereinafter, the "Factor VII Agreement"); and

WHEREAS, ZGI wishes to assign to NN the Factor VII Agreement and transfer to NN all of ZGI's right, title and interest in the Licensed Patents (as defined below);

NOW THEREFORE, IT IS HEREBY AGREED AS FOLLOWS:

ARTICLE 1
Definitions

SECTION 1.1. "Effective Assignment Date" means: September 28, 2000.

SECTION 1.2. "Licensed Patent" means: any patent or patent application that is within a patent family listed in Appendix 1, except 83-23C2 (US Patent Application No. 07/765,452 only as it applies to Factor IX and not to Factor VII). Said patent and patent applications shall include but not be limited to selection patents, provisional applications, patent applications, divisionals, continuations, continuations-in-part, reissues, re-examinations and extensions and foreign counterparts of the foregoing. Extensions of patents shall include; (a) extensions under the U.S. Patent Term Restoration Act, (b) extensions of patents under Japanese Patent Law, (c) Supplementary Protection Certificates for members of the European patent convention and other countries in the European Economic Area, and (d) similar extensions under any applicable law anywhere in the World.

SECTION 1.3. "Product" means: NovoSeven® or any other product encompassed by the Licensed Patents.

ARTICLE 2
Assignment of Factor VII Agreement

SECTION 2.1. Assignment. As of the Effective Assignment Date, ZGI hereby irrevocably and unconditionally conveys, transfers, assigns and delivers to NN all of ZGI's right, title and interest in and to the Factor VII Agreement and the Licensed Patents.

SECTION 2.2. Assumption. NN hereby irrevocably and unconditionally accepts the assignment set forth in SECTION 2.1 hereof, assumes all of ZGI's obligations under the Factor VII Agreement, agrees to perform all of ZGI's duties under the Factor VII Agreement, agrees to be bound by the terms of the Factor VII Agreement, and releases ZGI from further obligation and liability under the Factor VII Agreement.

ARTICLE 3
Assignment Fee

SECTION 3.1. Assignment Fee. On, before or within thirty (30) business days after the Effective Assignment Date, NN shall pay to ZGI an assignment fee of eighty one million United States dollars (US$81,000,000), less the amount of any royalty payments actually received by ZGI from NN or an affiliate of NN during the year 2000 and before the Effective Assignment Date that are attributable to year 2000 Licensed Product sales. NN or an affiliate of NN shall prepare this calculation no later than fifteen (15) days after the Effective Assignment Date. If requested by ZGI, the calculation shall be verified by PricewaterhouseCoopers, Denmark.

SECTION 3.2. Agreement Null and Void. This Agreement shall be null and void if the assignment fee set forth in SECTION 3.1 is not timely paid.

ARTICLE 4
Transfer of Licensed Patents

Upon receipt of the assignment fee set forth in ARTICLE 3 and following the Effective Assignment Date, ZGI shall begin the process of the registration of the transfer of ownership and/or control of the Licensed Patents to NN, which process may include execution of assignment documents, copying of files, updates on the status of ongoing interference proceedings and/or other related activities. Within thirty (30) days following the Effective Assignment Date, a patent representative of NN and ZGI, respectively, shall discuss and agree upon the action items, responsible party and expected completion date for all patent transfer activities. The parties will use their best efforts to ensure that the transfer process, executed in accordance with the mutually agreed upon plan, will be completed as soon as practically possible after the date on which the patent representatives met. NN shall reimburse ZGI for its

documented out of pocket expenses, incurred in effectuating the transfer of Licensed Patents to NN within thirty (30) days of NN's receipt of ZGI's invoice detailing such expenses.

ARTICLE 5
Warranty by ZGI

ZGI warrants that it, to the best of its knowledge and belief in the absence of specific current inquiry, owns the entire right, title and interest in the Licensed Patents, that the inventors listed in the Licensed Patents are accurately and completely listed in all material respect and that it has given to NN, its parent company Novo Nordisk A/S or other affiliates owned by Novo Nordisk A/S all information relating to Licensed Patents in ZGI's possession or under its control which ZGI deems material to this Agreement.

ARTICLE 6
Indemnification

SECTION 6.1. Personal Injury or Property Damage. NN shall indemnify and hold ZGI harmless from and against any and all claims, judgments, costs, awards, expenses (including, but not limited to, any attorney's fees) or liability of any kind arising out of personal injury or property damage caused or alleged to be caused by NN's or NN's affiliates' exercise of rights to Licensed Patents. In addition, NN or NN's affiliates shall assume all obligations for warranties and product liability claims that accompany or result from the sale or use of any Product, and shall indemnify and hold ZGI harmless from and against any and all claims, judgments, costs, awards, expenses (including, but not limited to, any attorney's fees) or liability of any kind arising from customers and relating to such warranty obligations or product liability claims. NN's obligation to indemnify ZGI under this SECTION 6.1 shall not apply in case of negligence or willful misconduct by ZGI.

SECTION 6.2. Insurance. NN shall maintain and cause its affiliates to maintain appropriate product liability insurance with respect to development, manufacture and sale of Products in such amount as NN or its affiliates customarily maintains with respect to sales of its other products. NN and its affiliates shall maintain such insurance for so long as NN or its affiliate continues to manufacture or sell Products, and thereafter for so long as NN or its affiliates customarily maintains insurance with respect to sales of its other products.

SECTION 6.3. Indemnification by ZGI. ZGI shall indemnify and hold NN and Novo Nordisk, harmless from and against any and all claims, judgments, costs, awards, expenses (including, but not limited to, any attorney's fees) or liability of any kind arising from breach of a warranty of ZGI.

SECTION 6.4. Survival. The obligations of this ARTICLE 6 shall survive the expiry or termination, for whatever reason, of this Agreement.

ARTICLE 7
General

SECTION 7.1. Governing Law. This Agreement shall be governed in all respects by the laws of the State of New York.

SECTION 7.2. Dispute Resolution. ZGI and NN will use their best efforts to settle all matters in dispute amicably. All disputes and differences of any kind related to this Agreement, which cannot be solved amicably by the Parties, shall be referred to arbitration as described below. However, before a dispute or difference is referred to arbitration, the CEO of ZGI and the CEO of Novo Nordisk A/S (through a request to this extent from NN) shall make a final attempt to solve the matter amicably. All disputes arising out of or in connection with the present contract shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with the said Rules. The arbitration shall take place in New York City and shall be conducted in the English language. The award of the arbitrator shall be final and binding on both ZGI and NN. ZGI and NN bind themselves to carry out the awards of the arbitrator.

SECTION 7.3. Entire Agreement. This Agreement and the Appendices hereto constitute the entire agreement between the parties and supersede all prior oral and written agreements, understandings or arrangements relating to the subject matter hereof. No addition to or modification of any provision of this Agreement shall be binding upon the parties, unless made in writing and signed by a duly authorized representative of each of the parties.

SECTION 7.4. Severability. The parties agree that, if any provision of this Agreement shall for any reason be held to be invalid or unenforceable, such provision shall be enforced to the maximum extent permitted by law and the parties' fundamental intentions hereunder, and the remaining provisions hereof shall not be affected, impaired or invalidated and shall continue in full force and effect.

SECTION 7.5. Headings. The article and section headings contained herein are for reference only and shall not be considered a part of this Agreement, nor shall they in any way affect the interpretation hereof.

SECTION 7.6. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, NN and ZGI have caused this Agreement to be executed in their names by their properly and duly authorized officers or representatives.

signed after Extraordinary Shareholders Meeting and Board Meetings were held:

NOVO NORDISK HEALTH CARE AG

Urs N. Pfluger
General Manager

Klaus Ehrlich
Board Member

ZYMOGENETICS, INC.

Bruce L.A. Carter
President & CEO

APPENDIX 1
Licensed Patents

ZGI Patent Family	Novo Nordisk A/S References	Parent Application	Includes US Patent	Derwent Title
83-23, except 83-23C2 (US Patent Appl. No. 07/765,452 only as it applies to Factor IX and not to Factor VII)	3138	US application Ser. No. 724,311	4,784,950	DNA construct used to transfect hosts to produce protein which activates to give factor VIIa
89-20	None	US application Ser. No. 471,313	5,288,629 5,824,639	New modified factor VII to treat and prevent coagulation disorders – has a reduced susceptibility to activation by plasma factor Xa and inhibits clotting activity of wild type factor VIIa
90-07	3598 4607 5214 5295	USSN 07/662,920	5,788,965 5,817,788 5,833,982 6,039,944 5,861,374	Modified factor VII for use as an anti-coagulant – inhibits tissue factor activity but is unable to activate plasma factors X or XI
None	3129	DK87/ 03235 (completed as WO 88/10295	5,580,560	Mutated human factor VII or VIIa proteins - with amino acid substitutions

FROM BAKERBOTTS

BAKER BOTTS L.L.P

Fax receipt will not be confirmed by phone unless requested.

(WED) 4. 10' 02 11:26/ST. 11:25/NO. 4860225476 P 1

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TO	Karin Tyson	FAX NO.	(703) 872-9411
FIRM/COMPANY	United States Patent and Trademark Office	VOICE NO.	(703) 306-3159
FROM	Lisa B. Kole	VOICE NO. (212) 408-2628	DATE April 10, 2002
RETURN TO	LBK	PERSONAL FAX NO.	PAGES (including cover) 11

MESSAGE

Applicants: Hagen et al.

Patent No. 4,784,950 Filed: December 16, 1986

Issued: November 15, 1988

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CERTIFICATE OF TELEFACSIMILE TRANSMISSION

I hereby certify that this paper, which relates to United States Patent No. 4,784,950, is transmitted by telefacsimile to Ms. Karin Tyson at the United States Patent and Trademark Office, telefacsimile number (703) 872-9411, on April 10, 2002.

Lisa B. Kole — April 10, 2002

Lisa B. Kole
PTO Reg. No.: 35,225

Date of Signature

Attached please find a Letter conveying a copy of an assignment to Novo Nordisk Health Care AG and a Revocation and Power of Attorney executed by Novo Nordisk Health Care AG.

Received from < 212 > at 4/10/02 12:18:31 PM [Eastern Daylight Time]